GOLDEN JUBILEE YEAR

S.L.A.D.A.S.

1935–1985

SOUTHEND, LEIGH AND DISTRICT AQUARIST SOCIETY

(founded 1935 or before)
Affiliated F.B.A.S. & A.E.E.L.A .S.

Meetings are held on the 1st and 3rd Tuesday of every month,
the meeting commences at 8.30 pm

VENUE:-

ST ANDREWS CHURCH HALL
ELECTRIC AVENUE
WESTCLIFF-ON-SEA
ESSEX
(entrance in Southview Drive)

GOLDEN JUBILEE YEAR EDITION
MAY 1985
1935-1985 1935-1985 1935-1985 1935-1985 1935-1985 1935-1985 1935-1985 1935-1985

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the cover was drawn by Sharon Goddard-Holt aged 14

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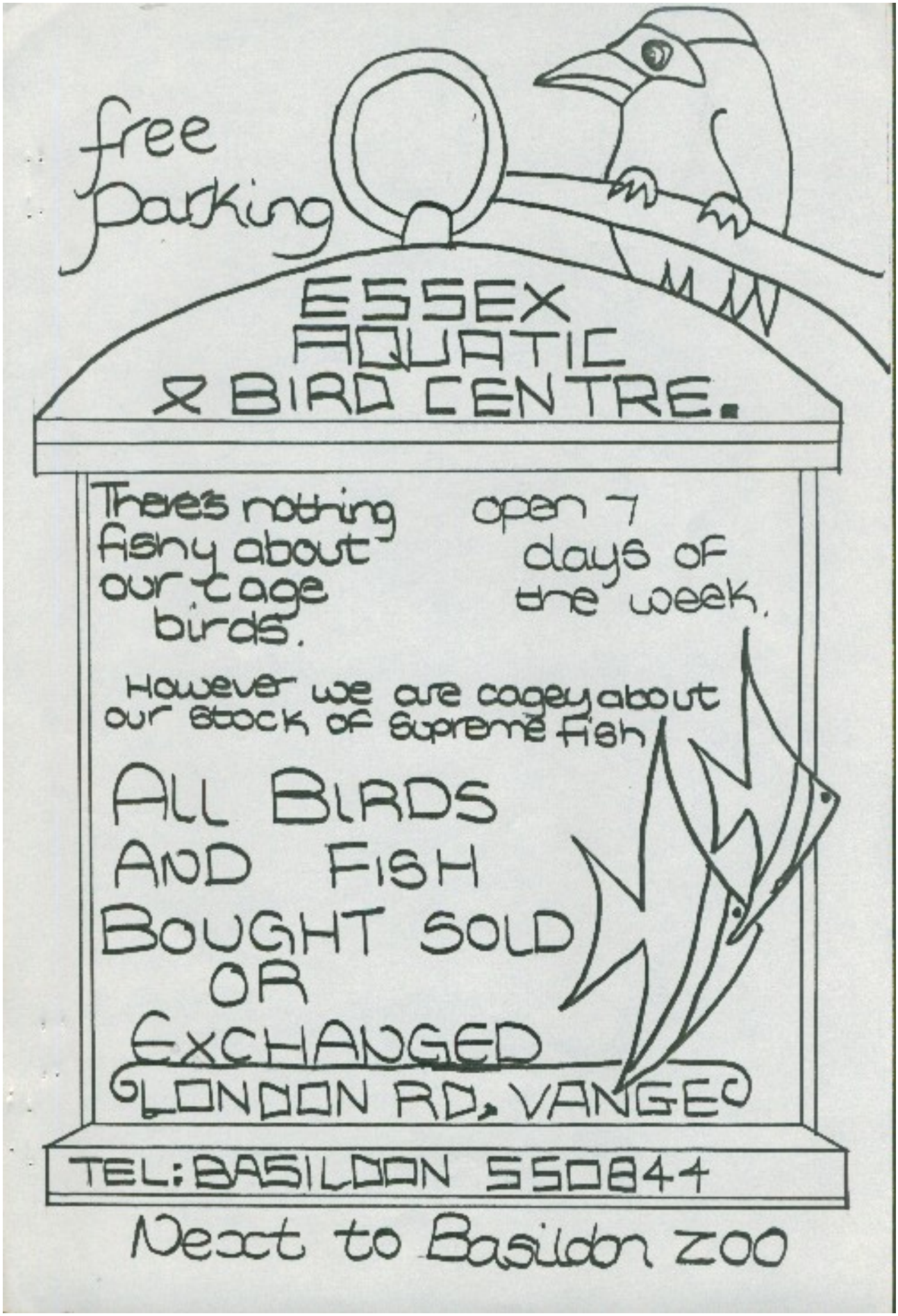
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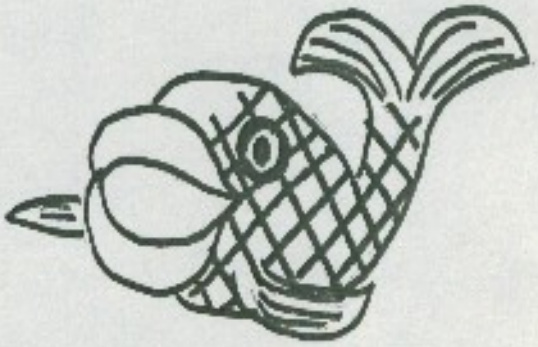

OPEN
7 DAYS
A WEEK
9 AM - 6PM

LYCHGATE
ARTERIAL ROAD,
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Rayleigh
773311

Behind
Blinking
Owl
Cafe

"If we haven't got it. We'll get it!"

EDITORIAL

S.L.A.D.A.S.. would like to welcome you all to our GOLDEN JUBILEE YEAR OPEN SHOW

A lot of hard work has gone into organising todays events for the experienced fish enthusiasts and members of the public all hoping to make this- quite a day.

Our thanks go to Terry Waller who has done an excellent job of getting this show on the road. Our club has members that specialise in various aspects of the hobby such as Malawis, Killiefish, livebearers, Gouramis,Fish showing. If you read this journal at the show PLEASE ASK any of the people wearing the club tee-shirts or Marshall badges for help or advice. If you read your Journal at home do not hesiate to phone any committee member for help and advice.

This being the first journal printed this year (due to an industrial dispute), there is quite a lot to catch up on. As usual the club has been very busy with various talks and shows.

With the bad weather in January the turn out was still good Bernard Pye made a very interesting talk on his trip to Thiaiand, and ths auction in February was quite a good evening. Gary Steptoe gave a talk and slide show on Marine life, well worth watching, extremely interesting even for the non-marine enthusiasts and the talk and slide show from Bob Esson enlighting even after an unfortunate accident the day before he still managed to entertain us. In April we had a good slide show from Rob Roberts rather specialised but otherwise good. The Inter-Club at Walthamstow was quite good with a lot of members getting cards,

Forthcoming events are including a trip to Folkestone Open Show on May 19th an occassion for the family, also a trip to Wildwoods Open Evening on May 22nd an evening out for those who specialise in various types of Tropical and Coldwater Fish and an opportunity to see a wide range cf lizards, Snakes and Toads from different parts of the world well wortjh seeing, and there will be the River Boat Disco up the Thames on July 20th thisshould be a great evening, I I hope you can make some of these dates.

Do have a good day at the S.L.A.D.A.S. Open Show and the best of luck to those entering into the spirit of the event.

Kevin Browse

FROM THE PRESIDENT.....

Welcome to this our Open Show in our 50th year, please enjoy yourself.

It hardly seems a year ago that we were all going through this day of mahem, why we do it year after year 1 do not know. A lot of work, goes into this show as you can imagine and it would be impossible to stage without the great amount of help that comes from our membership.

If you are fairly new to this hobby or if you have been keeping fish for a number of years you can do no better than join the Southend club where a warm welcome awaits you from our very friendly Society. It is a very well known and respected club with many distinguished members all of whom are only too eager to encourage and pass on any information about fishes, plants, showing and breeding,

We meet every first and third Tuesday of the month when there are always table shows, slide talks and demonstrations to cater for all aspects of the hobby so why not nip over to the club stand and join today.

I hope you have a succesfull day and wish you all you wish yourselves but please remember it is the. 90% who don`t win anything that makes it possible, for the winners without everyone we would not have a show.

T.W.Waller President SLADAS.

==========

AM I LUCKY ?

Over the past two years 1 have enjoyed a lot of success on the various Tombolas one encouters at Open Shows, to date 1Ihave won:-

A bucket and spade set (in partnership with Frank Chapman)
A twelve piece wooden jigsaw of two giraffes
A Christmas pudding in. the middle of July
A bar of .soap in the shape of a steam train
A top hat that doubles as a tape, measure
A vase made out of a milk bottle cut in half
A purse
A portable radio that someone pinched five minutes later
A pack of playing cards with weird shaped fish on them
A Cookery set

ANDREW WALLER

==========

The leprosy barb (*B. rhombocelatum*) is so called because bits keep falling off of it,

This and other usefull bits of information cam be found by joining the Southend Club.

ITS A FACT... Chocolate Gouramies that are kept in an aquarium that has the temperature to high are inclined to melt
"gosh what do you know" Yes what do you know, join SLADAS and find out about all these fishy facts

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BREEDING REPORT OF THE TIGER BARB (*Barbus tetrazona*)

The fish were purchased locally and kept in quarantine for three weeks and then put with other fish in a 24 x 15 x 12 in the fish house and kept at a temperature of around 78 deg F. Towards the end of August it was decided to try and breed them so. a male was selected, being of good colour and good size, given a 24 x 12 x 12 to himself and left there for three weeks on his own. Near the end of this time a breeding tank was prepared, this was a 24 x 15 x. 12 which was filled with fresh tap water, the spawning medium was to be coconut fibre, from my experience this fibre has been most sucessful. Nothing else was in the tank, heating was by space heating in the. fish house, which gave a water temp, of about 78 degF., full aeration however was put on the day before the two fish were introduced, which was a friday evening. Spawning commenced Sunday morning and finished about an hour later when the two fish were immediately removed., this specie is a known egg eater. The eggs which are easily seen, hatch in three to four days and the fry are free swimming in four to five days later.

The first food given was egg powder which was mixed with some water taken from the spawning tank and given three days after the fry were observed to. be free swimming. Once a day at first then after a couple of days twice a day. I use egg powder because 1 think it gives the stomach lining for other foods. The second food was freshly hatched brine shrimp given as soon as it was possible' for them to manage it and this was continued until the. fish were about twelve weeks old. It was then that the usual foods and feeding took over and about 200 fish were raised from this one spawning.

==========

TIPSTIPSTIPSTIPSTIPSTIPSTIPS

Tiger barbs lose most of their bad fin nipping babits when kept in little shoals of half a do.zen or so.

When, catching spiny fishes like corydoras or pim`s it is best to use a net made up, of nylon sheet rather than the. ordinary meshed net, this stops the spines penetrating the holes and trapping the fish which usually results in trimming round the net and having a fish with a little flag on it for the rest of its natural life.

When exhibiting a fish especially if it is a colourful species the fish will look much better, colourful and calm if the bottom of the tank is painted black. Also the back can be painted black but remember the judge must be able to see the. fish and it can be. difficult if the tank is too dark

' **LITTLE TOMS' APPEAR IN LONDON.**

by P.F.CAPON.(Copyright reserved.)

In 1973 Jin Connelly of Bethaal Green A.S. came to me with a tale of a most peculiar 'livebearer' that he had seen in the tanks of an East London aquatic dealer.His description was of a small,colourless,elongated fish, the male of whioh carried a gonepodium which seemed out of all proportion to the body of the fish and whioh had curled hook-like rays at the tip. Now,only one fish,in my experience,has such a preposterous anal fin- *Tomeurus gracilis*..I first leamt of the oddity by way of an article written by the late Myron Gordon back in 1955. At the tine I remember wishing to own some of these fish aad promising myself that if erer I came across any I would purchase some. But as the years passed memory faded and the ambit ion was forgotten.

Now in October 1973 the fish appeared to be arailable,Within an hour we were studying them in the dealers tanks,Jim's description had been accurate sthey were *Tomeurus* no other fish has a gonopodium of such distinction! The tank contained somewhat over a hundred of these fish, the label on the aquarium refered to them as 'glass oharacins (.but who am I to critise the dealer,with thousands of fishes arriving every day, for not readily identifying a fish that does not appear in any of the standard references arailable to the aquarist (exept for a photograph taken by Sam Dunton of the New York Zoological Society, which appears in the 1957 edition of the Encyclopedia of Tropical Fishes by Herbert Axelrod and the late William Vorderwinkler).Indeed,if he had been able to positiveljy identify them maybe they would have all been sold before I even heard they were in stock.

Against the advice that I would give other aquarists I purchased 5. I say against the advice because many of the fish in the tank were in poor condition,with perhaps 10% of them suffering from swimbladder trouble and the surface littered with dead and dying fish.In addition the only other occupant of the tank was a Sting ray.whioh I observed to eat 3 *Tomeurus* whilst we were netting out specimens .The*Tomeurus* normally swum in the top 2" of the tank but fear of the net drove them into the lower reaches where the ray was able to trap them with its mantle against the glass..

My 5 fish,carefully selected for apparent good health.were three males and two females.They had to remain in the bag for 5 hours before reaching the warmth of my fish house and in this time the temperature had dropped to 60°F. One of the males,the largest,of cours«,was by then in trouble,unable to swim upright: he died within a few hours.

Tomeurus gracilis was first described by Eigenmann in 1909 and comes from Guyana and Venezuela. Originally it was placed in the sub-family Tomeurinae in the family Poeciliidae, in 1947 Myers placed it in a separate family,the Tomauridae.as the sole ropresentative, .because although it bred by internal fertilization it was not a livebearer but layed eggs. Professor G.V.Nikolshi of the Soviet Union even went so far as to suggest it should belong to the super-family Tomeuroidae because of its uniqueness. In 1963 Rosen and Bailey returned it to the Tonurinae as the only oviparous sub-family of the Poeciliidae.

John T.Van and Clifford Pope,working in 1929 came across the fish in 'he tidal reaches of the Essequibo River in Guyana.They reported on it to the New York Zoological Society and of their attempts to keep it in captivity. They told of its being a surface dwelling fish which tended to hide under floating materials,only to swim off at great speed if disturbed .They also wrote of finding It in pools left after flooding of the river; these pools were said to reach, temperatures considerably in excess of the main body of water.They also described the retention of eggs and well-developed embryos but were unable to find evidence of live birth. They said that "Iowa-Iowa lice" was the Creole name for the fish whilst the Europeans termed it the'sword-finned minnow' ,presumably because of the gonopodium.

I can find no further referenceto *Tomeurus* until 1955 when Myron Gordon wrote of his experiences with them;that is not to say that references do not exist,but as an amateur aquarist my time and literature are limited. M.Gordons stock, which consisted of just one pair of living fish given to him by Axelrod, came from a South American shipment to World Wide Aquarium Supply Company of New York.In addition they had the foresight to freeze a number of specimens to enable then to be studied without M.Gordon having to sacrifice the living ones .Reference to the report by Van and Pope led him to set up a tank for the *Tomeurus* with aged water to which salt had been added; contrary to his normal meticulous reporting Myron Gordon tells us the depth of water, 4" ,and the amount of salt added te the tank,but not the volume of water in the tank. Neither is any reference made to the adult size the fish can reach, looking at my own specimens,the largest of which is 25mm.,I would hazard a guess that the marximum size would be no more than 35mm. Gordon handed his fish to Rosen due to his experience with lirebearers. Rosen noted that fertilisation took place shortly after dusk, during day light the female repulsed the male's advances by constantly facing him as he circled her attempting to mate.Spermatophores were recorded attached to the female's anal although whether these were poor misses or the result of actual mating does not appear clear. I am not sure whether it is known whether internal fertilisation takes place or whether the spermatophores are simply placed as near the genital opening as possible.The eggs,according to the reports,are laid singly at the rate of one a day and attached by adhesive filaments to suitable plants,The female avoids her mate,arches her back into an 3 shape and deposits the egg at the chosen site. The eggs take somewhere around 4 weeks to hatch,although Gordon in his article does not actually record any hatching.

My own pairs of *Tomeurus* were kept in an 18x10x10 tank containing aged rainwater to which a teaspoon of pure salt was added.The dealer is reputed to use base exchange softened water acidified on occasion with sodium hydrogen phosphate,but whether the *Tomeurus* were in such water is not known. Knowing that they come from esturine conditions,acid water odviously is not their ideal. My largest specimea,the male that died,was examined under a microscope because of its small size.The fish measured 25mm from snout to caudal peduncle but only 4mm at its greatest body depth.The dorsal fin. had rotted completely away but from the indentations on the back it must of been less than 4mm at its base, it is set well back and is similar in shape on the live fish to a female fighter's dorsal.The pectorals had 8 rays, and the tall 18,all of which appeared to be soft Approximately below the trailing edge of the operculum there was a pair of fins that consisted of only one short curved spiny ray. Behind these came the characteristic gonopodium, unfortunately the curved extensions of three rays ,which gives the impression of a basket,had rotted but the remaining fin measured 7mm and appeared to consist of 33 segments .Behind the gonopodium was another unpaired fin,which reminded me of a long adipose fin: it contained 12 triangular spines which had a slight curve towards the tail.The operculum appeared to have an extension from the unusual curved shape, reminding me of, *Lepomis megalotis,* although I do wonder now whether I was seeing an internal structure. Live females have in place of the gonopodium a fan-shaped fin. Now, I have carefully avoided naming the fins on the underside for if the pair of fins beneath the operculum are the ventrals then the fish has two anals,or, if they are only spines then the gonopodium is formed from one or both the ventrals and the female sports only one ventral.

The body is reminiscent of an eel in that the internal organs appear crowded close to the head. It is transparent and devoid of colour except that the sac containing the internal organs shows an iridescent blue under the right side-light conditions::under top-light it is simply a transparent fish. The swim bladder is easily seen, being approximately oval in the female;the male's is much longer and of a similar length to the gonopodium, presumadly to balance the extra weight of the organ.The mouth is turned up and appears to belong to a carnivorous fish rather than a vegetarian one; it is larger than would be expected for so small a fish.They have been shown to take dapbnia,artemia and some dried food.

Tomeurus gracilis poses many questions; is it a precursor of the livebearer, is it a livebearer that has gone back to egg laying,or is it as suggested unrelated to the Poeciliidae? If the latter is the case,living as it does in the wide waters of the Essequibo where shedding of eggs and milt would possibly result in only a small proportion of fertile eggs, perhaps it has evrolved the gonopodium independently as a method of insuring that each and every egg is fertilised.
Whatever the relationship of this fish to the common lirebearers it certainly is an odd one about which many facts are still unknown.lt is a worthy addition to a collection of unusual fishes.The best common name to apply to it is,in my opinion,that which Myron Gordon coined Little Toms.

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YOUR CLUB'S LIBRARY

One of the major advantages of belonging to an aqaurist society must be the opportunity it provides for easy access to information on any fishy topic. There are three readily available sources of such information, the first is the twice-monthly meetings. Many of the speakers who bring their knowledge to the club have a very relaxed way of talking on a wide range of topics. This less formal approach to Fishkeeping often makes the facts a lot easier to remember than reading a book. Secondly amongst the membership of S.L.A.D.A.S. there are quite a few members with many years of practieal experience in all aspects of the hobby. Newcomers to the pleasures of fishkeeping, myself included have only to ask and someone can always be found who can relate their firsthand experiences, and discuss any problems you may hare.

The third and equally valuable, source of information is the clubs own library. There are numerous books available to members at present. These books may be borrowed FREE of charge from one meeting to the next. With an average collection it is obviously not possible to cater for every specialist taste. But if a particular aspect of the hobby: does appeal to you then I am sure something can be found for you.

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NIGHT OUT

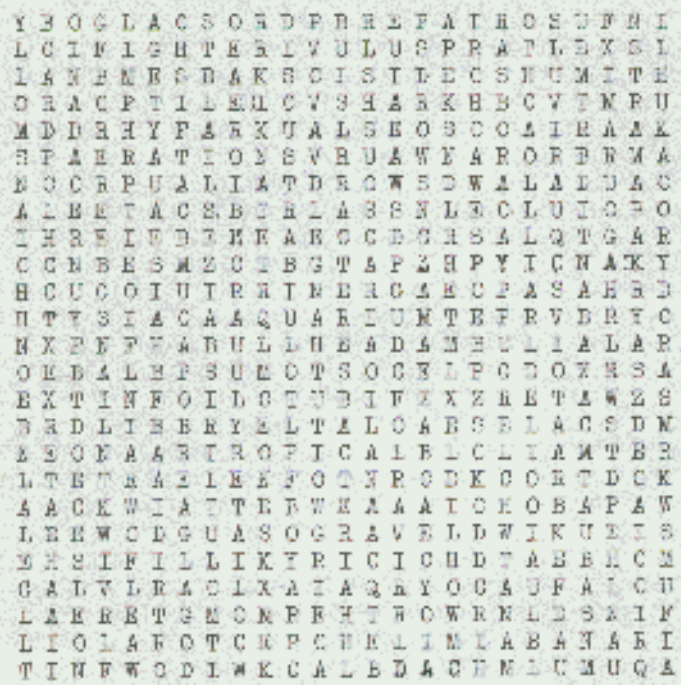
A T

WILDWOODS

22 May 1985

TRANSPORT AVAILABLE

WORDSEARCH by Fred Ray



Can you find the following words in the grid.....

Aeration	Coral	Limia	Scales
Algae	Corydoras	Loach	Seat
Amazon Sword	Dace	Lyretail	Shark
Ambulia	Danio	Medaka	Snail
Anabantid	Dojoal	Molly	Swordtail
Angel	Eel	Mulm	Tank
Aquarium	Fighter	Neon	Tench
Artemia	Fins	Net	Tetra
Bacteria	Flea	Oscar	Thermometer
Barb	Gar	Oxygen	Tinfoil
Betta	Goby	Pacu	Tropical
Bloodworm	Gourami	Pectoral	Tubifex
Bullhead	Gravel	Perch	Water
Carp	Guppy	Pike	Zebra
Catfish	Halfbeak	Plecostomus	
Caudal	Heater	Rain	
Cherry	Infusoria	Rasbora	
Chub	Killifish	Rinnia	
Cichlid	Kuhli	Sivulus	
Clown	Labeo	Rook	

Can you also find the names of two fish that are not listed but are hidden on the grid

HATCHING BRINESHRIMP

by Kevin Browse

A pickle jar, as seen in the local chippy, is thoroughly washed until all. trace of the former contents is removed. A plastic lid from a 7 oz coffee jar is used to stop salt splashing over the edge. The lid should have the cardboard insert removed then make a small hole to take the airline. It is important that the hole taking the airline is .small enough to make a tight fit. Enough airline is passed through the hole to, reach the bottom then fit an air stone. If the airline is loose because the hole is to large the airstone will rise under pressure.

The jar should then be filled to just below the widest part, then add a heaped tablespoon of cooking salt. The water is aerated until the salt has disolved. Switch the pump off and add a teaspoon full of eggs. Allow .a few -minutes for the eggs to absorb the .water before switching the pump on again. Between 24 - 48 hours, depending on the temperature you should have millions of baby shrimps to feed to your fry.

Separating the shrimps is done by turning the pump off and as the shrimps are phototropic they congregate near the light. They should be syphoned out using airline tubing and using either a proprietry brand brineshrimp sieve or a handkerehief .

The shrimps must now be rinsed otherwise continual feeding with them can build up an intolerable level of salt which kills the fry.

A few things to remember when hatching brineshrimp

Avoid syphoning eggs for if eaten they can damage the fry.

The brine can be reused provided the first batch of eggs are removed from the water

Several feeds can be provided from one batch of eggs.

Professional fish breeders use newly hatched brine shrimp at the eariest age the fry can consume it.

The first six weeks of a fishes life determine whether he will be anything special. No matter how much you feed a stunted fish he won't grow into a show winner.

==========

DAY OUT

FOLKESTONE SHOW

19th May

with

Folkestone Fair snd Market

The Red Salmon Rainbow

by C. Cheswright

This fish has recently arrived in this country and is available from time to time in the shops. However the price they are offered at varies from about .£2 upto £10 each, this is quite a variation! The scientific name for this fish is *Glossolepsis incisus.* This fish has become recently available along with many other species of Rainbowfish as they are being bred on the continent. Very few of the fish are wild caught specimens due the great difficulty in getting wildlife out of Papua and New Guinea, where most of these fish orginate. It has been noted on a few occasions that these fish have been sent to this country and have all turned out to be males. It appears that certain breeders abroad and in this country were actually killing .off the females, in order tn keep the price high. This appears likely as the odds of a few species producing males only is very unlikely, the females are not sent as these are the less colourful.

The Red Salm,on Rainbow usually appears in the shops as a silvery coloured fish which is not very attractive, the price usually puts off most fishkeepers, apart from those who know what they are. In ; good condition however this fish is very spectacular. The male takes on a brilliant red .hue which seems to shine, the female is a shining olive grey to silver. When small the fish are very ' Australian Rainbow` shaped, but as they grow, the fish take on a more rounded shape. When adult these fish are impressive, their maximum sise is recorded at 120 mm.

They are active fish requiring a lot of swimming space and plenty of aeration. A temperature in the high 70`s is benefical and appears essential for spawning. They appear to take any foods but prefer that which stays near the surface, this includes dried fcod and water fleas. These are shy fish and prefer a tank with some cover, : particularly plant, to prevent scaring .them too much when near the tank and also to escape the pursuit of the other fish.

Breeding these fish is not difficult and follows the same basic pattern of all Rainbow type fish. A reasonably large tank is required with plenty of swimming space, this should contain a fair amount of fine plant such as Java moss. The cleaniness of water is not too important, not is the quality, tap water is adequate. The temperature should be in the low 80's and aeration provided. A pair of fish should be added and left in the tank for about 2 weeks, during this time the fish can be fed, normally, this helps fo form infusoria for the young fish. The adults are then removed and fry will appear from the next day. this tends to indicate that the parents are feeding on the young fry. The fish spawn by scattering the eggs a few at a time over a period of many days. The fry swimm near the waters surface and should therefore be fed on fry foods such as brine shrimp, dried foods and later sifted daphnia.

cont.....

The fry do.not grow very fast and take some months to mature.

They are, therefore, pretty fish'that are relatively easy, to spawn. This suggests that in the near future when breeding becomes widespread The availability will increase, and, the. price will decrease, we hope. Many other species of Rainbow should be as easy and worthwhile to maintain and breed, although a few. Appear to require special water conditions. Look out for these new. imports they are well worth considering.

==========

To make YOUR Journal even more interesting I propose to have a questions and answers page. If you have any, aquatic, problems you would like answered pleased, tell .me and I will.publish both the question and the answer.

It's always being harped on that It's the samefew writing in the JKournal. I would like to add to the list and print YOUR articles, would you therefore .like to write a few lines on the types of plants you find easiest ,to grow and those which you find impossible. The article can contain the following number and type of lighting, duration, depth of water, p.H.., do they grow better at certain times of the year, do, you.use plant fertilisers? If so which one? What type of filteration do you use? Have you used others? Why did you change? Together with any observations which you felt might help someone else grow that plant.....; .

All articles will be printed, the best one will win a pair'of fish or some plants.
GOOD LUCK Ed. (Kevin Browse)

==========

NIGHT OUT ON THE THAMES

RIVERBOAT DISCO

20th July, 1985 - £9.00 per head
(coach,entrance and buffet incl.)

BOOK NOW WHILE YOU CAN !!!!
(£2 deposit)

see Len Fox.

THE SEVEN DWARFS.

For many years the Mosquito fish, *Heterandia formosa* was thought to , be the smallest tropical freshwater fish. But it is not so, it comes 7th in the dwarf league and our old friend the guppy which again is looked upon as being small comes in at .74th . The smallest fish is now thought to be a goby called, *Pandaka pygmaea* which comes from the Philippines and reaches the colossal size of 7.mm.

TOP SEVEN ARE;-

Pandaka pygmaea	*7.5 mm*
Mistichly luzoneasis	13 mm
Poecilia minor	17 mm
Neoheterandria elegans	18 mm
Phallatorynus jucundus	20 mm
Poeclliarsis prolifica	20 mm
Heterandria formosa	20 mm

==========

ANOTHER ONE OF THOSE "HOW IT GOT ITS NAME ARTICLES"

Coco was a well known Asian fisherman who every day used to go out in his boat on the local paddy field dressed in the time honoured traditional dress of his forefathers (most of us only have one) of check trousers, bow tie (revolving) topless bowler hat, size 40 boots and large red nose.

Well one day he. got up off his seat and after wiping the custard off his backside, pulled in his net and low and behold he had caught a lovely nine inch orange -and black striped loach. My word he said in Indonesian I have discovered a new species of fish, I think I will call it the **Clown Loach,** now not a lot of people know that....,,..,

editors note.....I am beginning to doubt the validity of some of these fish name articles.

DID YOU KNOW

Linda Melia loves going to Folkestone and going on the roundabouts.

The Spanner Barb is so called because the markings resemble a shifting spanner.
(Whats a shifting spammer?)

There are over 2000 species of Characin , I made it 2003.

A nationwide magazine has just printed a two page article on how to breed Convict Cichlids, if you missed out on this important scientific first, Kevin can get copies for you.

The Pres `has promised to stop calling Kelvin Kevin and Kevin Kelvin

Southend recently got two Best in Shows on the same day, 400 miles apart,

The SLADAS coach company are arranging trips to Folkestone and a Disco boat up Thames, the Pres` was asking about life jackets,

AQUATIC AND PET SHOP

81/83 SOUTHERNHAY, BASILDON.

TELEPHONE: BAS.21680

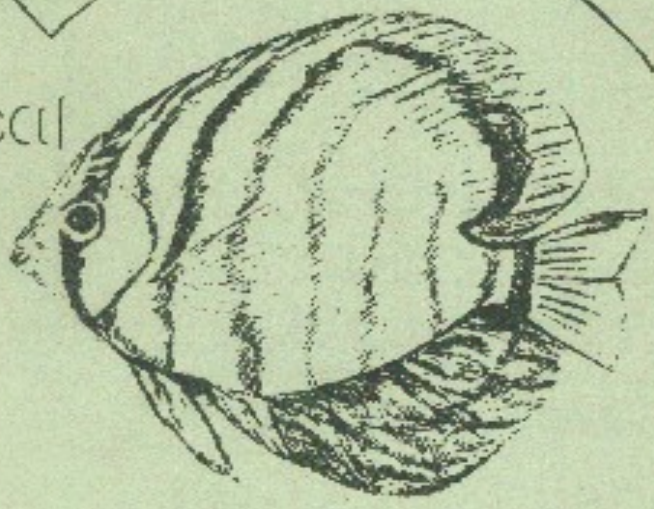
TROPICAL AND COLDWATER FISHES

PLANTS, FOOD AND EQUIPMENT.

ALL LIVESTOCK FOODS AND REQUISITES

BURGESS AQUATICS

BILL 22066

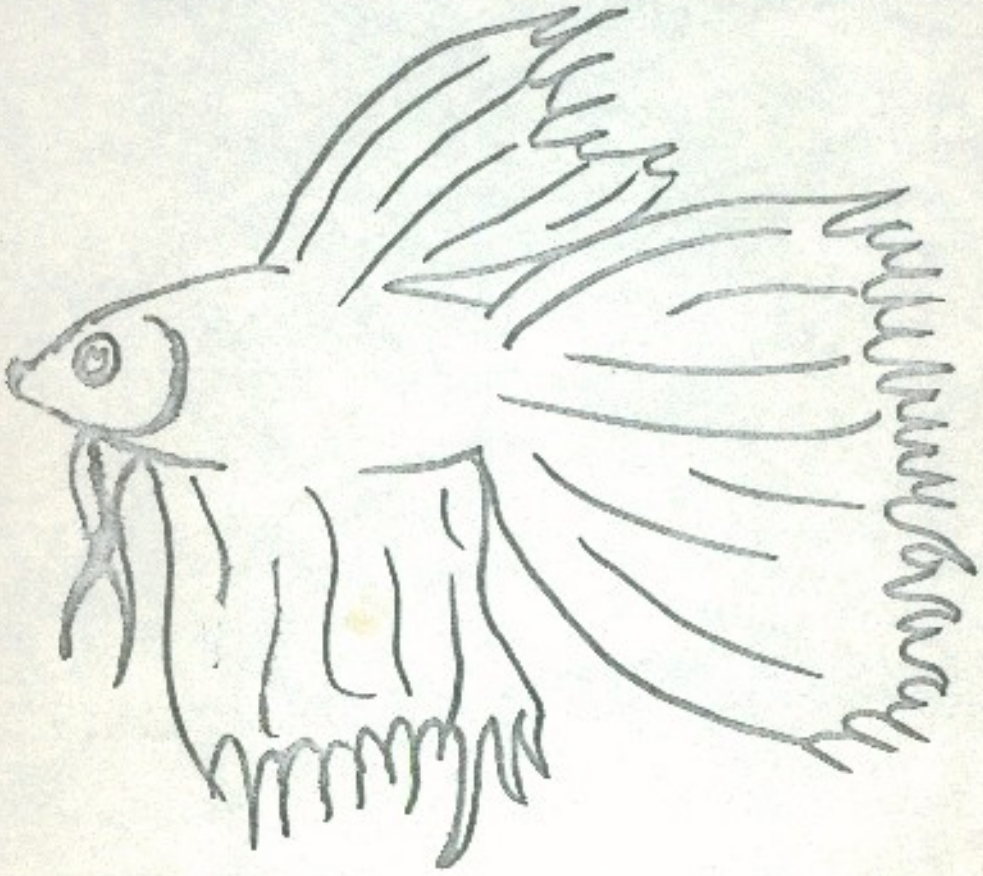


Tropical Marine

Coldwater

727 Rayleigh Rd, Hutton.

S·L·A·D·A·S·
JOURNAL



OCTOBER
1985

SOUTHEND LEIGH AND DISTRICT AQUARIST SOCIETY
(Founded 1935 or before)

Meetings are held on the 1st and 3rd Tuesday of every month, the meetings commence at 8.30p.m.

Venue:-

ST. ANDREWS HALL
ELECTRIC AVENUE,
WESTCLIFF-ON-SEA, ESSEX.
(Entrance in South View Drive)

BI-MONTHLY JOURNAL
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EDITORIAL

Welcome to another edition of the S.L.A.D.A.S. Journal and the message this month appears to be APATHY RULES OK

Expecting a slow response to my what is your opinion/aquatic problem page but never the less some kind of response instead of nothing 'NIXT, NOWT!. How about remedying that for the next issue? PLEASE.

As you are probably aware "Studio One"how has a new owner. He has informed me that a 10% discount will be given on cash or cheque transactions. To claim your discount you should produce your membership card containing your signature. This discount does not extend to credit cards.

Hopefully the next journal will not be so long in coming until then.

GOOD FISHKEEPING

KEVIN BROWSE

PRESIDENTS PAGE

It has been a very busy time for the club in the past few weeks, our Open Show has of course occupied a lot of our energy and it is times like these that we are very lucky to have such a hard working committee and get such great support from the members, it is after all Our club is'nt it.

We have also had a couple of Inter Clubs with Walthamstow and Romford where we seem to not only win most of the cards going but also come away with the majority of the raffle prizes as well.

Coach trips seem to be very popular at the moment and 1 don`t.think some of us realise how lucky we are to have our own private coach company. Don`t let us forget the ordinary meetings, these also have been of a high standard with the Killie talk one of the highlights. So you newer members you can see there is a lot to keep you occupied here, you are very welcome and if you want ;to know anything or get involved and don`t know how then please help us by asking, we can always assist and lifts are always available.

It has been particulaly gratifying to me to see one or two of our members coming to the front and starting to become a real power to be reckoned with at the Open Shows. Coming up is our Disco River trip (see Len), another inter club at Romford, the Pond competition, Furnished and another coach .trip to Ashford and on to somewhere nice (sorry Dave)

==========

Dear Mr Editor,

How do I get rid of Snails in my tank, it started off with an odd one but they seem to be taking over, where did they come from?

We expect you have all noticed who is back on the raffle winning trail Andrews been at it again (see last magazine) he won a bottle of scotch and pomagne both of which dissappeared quickly, a selection of fancy bath soaps , a top hat tape measure, and a stuffed- tortoise since the last magazine.

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WANTS.....

Has anyone got a male Madagascar Rainbow they want to sell it needs to be about three inches also a female Oddessa barb
.... see the Pres.

==========

CONGRATULATIONS.... are in order to Neil Claydon and his wife who gave birth to a son a couple of weeks ago, well done Neil see the treasurer to sign him on, also congratulations to Will Chapman, no not an addition to the family but for winning the Fighter Championship at Corby Open Show, well deserved.

DISCUS . . .

DISCRIMINATING, NOT DIFFICULT

One of the problems many fish enthusiasts encounter is that they fail to view the aquarium environment from the fish's eye view.

Some of the most healthy discus we have raised, grew up in an aquarium which would have appalled many "discus nuts." There was such an overgrowth of algae in the tank that we had to clean part of it out every so often so we could observe the fish.

This tank looked terrible from a people point of view, but it was not dirty. Since the ten fish which were raised in this habitat produced two breeding pair upon reaching maturity, I'm sure my discus thought it was a lovely environment.

Discus collectors such as Dr. Herbert R. Axelrod tell us that discus come from rivers close to the Amazon and are seldom seen in open water. They prefer to remain close to a sunken log or fallen tree. Therefore, finding the wood was our first concern when setting up this tank. We live near the Manatee River, so we walked along its banks looking for some natural driftwood. We found some adequate pieces to fit the 70 gallon tank we would use.

We first baked the wood in the oven at about 250 degrees for half an hour to kill any organisms which might be living in it. It was then submerged in a strong solution of bleach water for two or three days to further disinfect it. When it came out of the bleach bath, we rinsed it well and set it in the sun for several more days to thoroughly dry and to allow the chlorine to completely dissipate. Convinced it was now safe to use in the aquarium, we siliconed some weights (stones work fine) into a portion hollowed out on the bottom, so it would not float in the tank.

We used a bare bottom tank so any uneaten food could be spotted and removed. Some live Amazon Sword plants were placed in gravel pots in the tank. Between the live plants we placed large plastic plants to give the tank an overgrown appearance. As algae began to grow, we left it. Soon our driftwood and plastic plants were profuse with algae.

Our fish grazed happily on the log and plants, and had many hiding places. This cut down considerably on the chasing which normally takes place with young discus as they develop their pecking order. We believe that the loss in young fish was greatly minimized. We had lost two of the original twelve.

The tank had a good outside power filter and one side mounted heater. We didn't worry too much about temperature variations since, we reasoned, there would be natural temperature variations in their natural habitat. We kept the range between 80-88 degrees.

Water changes were done only every two to three weeks with about one fifth of the water replaced each time.

The fish were fed morning and late afternoon, and received a good variety of foods including flakes, frozen brine shrimp, beef heart and occasionally live tubifex.

When the discus reached maturity, both breeding pair which developed, about three weeks apart, decided that the driftwood was a good place to spawn.

Our tank was not a showplace, nor was it intended to be. It was a discus habitat. We have come to believe from our experience that while discus are discriminating, they don't necessarily have to be difficult. You simply have to try to view their world through their eyes.

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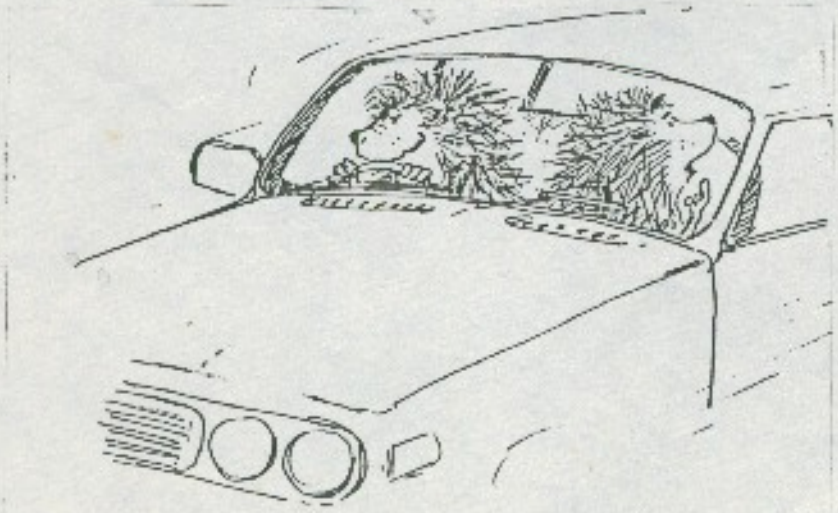


"You just squashed a person back there dear."

THE CATFISH AND THE DOG

by P. F. Capon

THE "SUNDAY MIRROR" for June 30th, 1968, carried a report headlined "Swamplands Terror of Walking Catfish." The headline and the article gave the impression of a monster stalking the Everglades and other watery areas of Florida devouring everything in it's path. The reader was led to believe that this monster was far worse than anything that horror film makers could conjure up. The article was accompanied by a photograph of the catfish with the caption, "Like Some Monster From Prehistory a Walking Catfish". The article suggested that the catfish had been known to actually attack a dog!

What species of fish can this be? What freak of nature has caused the fish to carry out forays on land and to attack dogs? What horror now stalks the Everglades in search of poor defenceless mongrels?

The fish that has earned this infamous reputation is none other than our old friend the albino variety of *Clarias batrachus!*

Wondering how on earth the albino *Clarias* could have earned such a foul reputation, I contacted Mrs. Tina Mann, who is the editor of the *Trader* published by the Florida Tropical Fish Industries. I asked if she could tell me how the *Clarias* came by his bad reputation.

Apparently the *Miami Herald* carried the original story under the headline of "Walking Catfish Attacks Dog," together with a photograph of the aquatic criminal. It was alleged that the catfish jumped out onto the bank and chased and attacked a dog in the dog's own backyard. The dog was at least twenty-five times bigger than the intruder, but according to the *Herald* the fish did the attacking! As Mrs. Mann said "... this is as ridiculous as a butterfly attacking a shark in mid-ocean."

When the story first appeared in the Florida papers, nobody who was in any way familiar with tropical fish took it seriously. The majority regarded it as a misplaced story from April the First.

The Florida Game and Freshwater Commission and an organisation called "Exotic Research" viewed the matter more seriously. In only three weeks they had succeeded in banning the importation of the whole Clariidae family. It is now against the law for anyone to possess any member of the family. State agents are empowered to enter any house, retail premises, or fish farm and to poison any member of the Clariidae family they may find.

Whether they could tell a *Clarias* from a Croydon is another matter for Tina tells of a case several years ago when she requested a permit to keep piranhas. A member of the Commission duly arrived to inspect the fish and asked for them to be pointed out as he had never seen a piranha.

In a report read by the Game Commission the fish farmer had to watch helplessly as the agents poisoned fifteen hundred *Clarias* in his outside pools.

Exotic Research through a number of press releases has made various statements to the effect that the *Clarias* is a monster, that when Rotenone (a fish poison) is added to their water they leave it and crawl away, and that they crawl out on the banks by "walking on their elbows" and travel overland. They also state that the albino *Clarias* has no known enemies neglecting the fact that their distinctive colouring will make them stand out from their surroundings. I am not familiar with the Florida fauna but I would imagine that a *Clarias* would make a tasty meal for at least one of the several species of snakes that presumably live there, not to mention the alligators. In any case, cold spells in Florida often drop to 50°F. or even below and *Clarias* are not known to survive such a temperature for any length of time.

Exotic Research and the Game Commission fear that *Clarias* will upset the balance of nature, but Mrs. Mann counters that the measure that does most to upset the balance of nature is *Homo sapiens* with his poisonous chemicals and wanton killing.

Water Hyacinths (*Eichornia crassipes*) have established themselves in Florida waterways and have been sprayed with poison. The hyacinths have survived but the indigenous flora and fauna have been severely affected. A similar situation looks like taking place with regard to the *Clarias*. Waterways are being treated with poisons, the *Clarias* is able to escape from the poisoned water by crawling out but the native species are not. The very persons whose avowed aim is to protect the native flora and fauna appear to be using materials to exterminate "exotics", which are having an adverse effect on just these natives.

On 14th August, 1968, John Pennekamp, the associate editor, wrote in the *Miami Herald*, retracting his paper's previous statements under the heading "Walking Catfish is No Threat". Mr. Pennekamp wrote "... it's a witch hunt, another instance of bureaucracy's policy of act now and look later." "The public is being given a lot of half truths by commission scientists who admittedly know little about *Clarias* . . ." He also points out that *Clarias*, after their terrestial journeys, often die of skin infections and fungus, caused by injuries and abrasions, soon after they are put back into water.

In a letter to the author Tina Mann wrote that erroneous newspaper articles had frightened elderly people to such an extent that they refused to walk on the lake sides in case they might meet a "monster" *Clarias*. Members of the Florida Tropical Fish Industries had appeared on television in an attempt to dispel these fears and to try to put the record right.

Now, the Florida Game and Freshwater Commission may have a point in that alien fish could upset the balance of nature in Florida waters. But they have attacked the problem with such speed and vim that their motives are bound to be suspect. The fact that the newspapers got the story, presumably, from either the Game Commission or Exotic Research, of the *Clarias* attacking a dog makes one doubt whether they have knowledge of fish other than those that would interest sportsmen. After all, the inclusion of "Game" in the Commission's title implies that they are primarily interested in just those fishes that put up a good fight when caught on a line by an angler. Other fishes, be they exotic or natives, which do not fall into the category of game are

most likely regarded as just a nuisance unless they are suitable for bait.

Philip Manaccini writing in his publication, the "Ichthyophile" tells of the lack of *Poecilia* (*Mollienisia*) *latipinna* in the canals of Florida. *P. latipinna*, a native, was once common in this part of America, but is now becoming rarer owing to man's liberal use of chemical sprays in and around the water courses. The Game Commission does not appear to be worried about this fish dying out presumably because it is of no interest to the anglers.

The albino *Clarias* feeds on small fishes and amphibians and is said to be particularly fond of snails, and if it consumes too much in it's chosen stretch of water it must seek new pastures. It is unlikely to devour every last creature in a given locality because once it has killed off most of it's prey it will starve for it will expend far more energy in seeking a meal than it will get from that meal. At the time of the *Clarias*' demise there may be only a few fish, amphibians or snails left but as aquarists we know of the incredible fecundity of aquatic creatures. With *Clarias* gone because of his own appetite the indigenous creatures would eventually regain their original numbers.

Another point is that Florida, contrary to popular belief, can have cold spells. The temperature in Florida can fall to 50°F. or below and frost and snow are not unknown. It is not likely that the *Clarias* coming from South East Asia can stand low temperatures. The *Clarias* indicted is the albino form of *Clarias batrachus* and albino forms are generally regarded as being weaker than their normal coloured relations.

Lest I have given the impression that I am in favour of albino *Clarias* or other non-indigenous fish being introduced in any stretch of water, perhaps I had better state my own views. To my mind no fish, or other aquatic creature or plant, should be introduced into any water where it does not normally live without very careful consideration of the possible effects. The introduction of fishes such as the guppy, *Poecilia* (*Lebistes*) *reticulata*, and *Gambusia affinis* to control mosquito larvae and hence malaria is a case where the introduction of alien species is valid. In this instance it is a case of survival of man himself with these livebearers as valuable allies in his battle. In areas where mosquitos are prevalent as carriers of malaria there is obviously a biological niche that these fishes can fill especially as the larvae are a favoured item of their diet. But it should not be forgotten that even such apparently inoffensive little fishes will eat the eggs and fry of other varieties. However, their introduction to foreign waters should only take place when it is to man's advantage and when there is little risk of their ousting the indigenous fauna. *The Gambusia*, in particular, has an almost insatiable appetite for mosquito larvae. Alvin Seale, one time Superintendent of the Steinhart Aquarium, California, carried out a test on *Gambusia affinis*' mosquito larvae eating capacity. He isolated a female in one small tank and for comparison placed a goldfish of a similar size in an identical tank. Into each tank he counted five hundred larvae and then left the tanks for twelve hours. When he examined the two fish at the end of that time he found that the goldfish had eaten two hundred larvae and died in the attempt, whereas the *Gambusia* had eaten all her five hundred and gave every impression of still looking for more.

Another fish that is introduced into waters other than where it is native is *Tilapia mortimeri* (*nilotica*). Here again the fish is serving mankind in that it is supplying many of the underdeveloped countries with much needed protein. Without the several species of *Tilapia* used, primarily, in pond culture, the numbers of people dying of protein deficiency would be greater than the already alarming figures indicate. Here again is a fish that is aiding man in his fight for survival. However, in at least one locality *Tilapia* have established themselves where their presence is not necessarily in man's best interest.

The San Antonio Zoo keeps a number of *Tilapia mortimeri* in a small stream that runs through the Zoo's grounds. The fish are kept from escaping by the use of wire netting. The inevitable happened; while the netting stopped the escape of the adults the fry found the wire an easily surmountable barrier. Numbers of fry escaped through the mesh and now the *Tilapia* is established and breeding in the San Antonio River system and threatens to establish itself in other Texas rivers.

In addition to the total ban on the keeping of *Clarias* in Florida, other States have already passed legislation banning other species of fishes. The first laws passed against aquarium fishes in the U.S.A. were enacted in 1957. In that year Kentucky banned the sale of Piranhas and *Abramis brevoorti*. In May of the same year Florida banned the Piranhas; also in 1957 Congress passed a bill prohibiting the importation of Piranhas and South American species of parasitic catfishes such as Vandellia species.

Oregon considered a bill to give the Game Commission the right to destroy any dangerous animal and also the right to decide which animals were to be considered dangerous. A one dollar license would have been needed for each individual fish of the Characin group of fishes. Another bill considered by that State would have required that no animal under six weeks of age could be sold unless it was accompanied by its mother. Consider the poor dealer selling portions of rabbits! Of course, ostensibly these bills were designed to prevent the release of exotic fishes into Oregon waters. But the writers in this State would soon settle any tropical fish that might have been released.

South Carolina attempted to get a bill passed to outlaw any aquatic creature not native in that state. Illinois tried to pass a statute requiring a certificate of ill health signed by a veterinary surgeon to accompany the sale of each and every animal; how many vets really know much about fish diseases? Surely they are more usually concerned with warm blooded pets and farm animals.

California brought forward legislation to ban all the Characins and Cyprinid fishes; these two groups probably account for about 75 per cent of all our aquarium fishes.

A Californian dealer, Frank Adams, refused to allow the Game department to have their way with his stock of Piranhas and was promptly arrested. The Department asked the judge to fix a bail of the incredible sum of one million dollars! Yet it is said that the California Fish and Game Department had, paid an eminent ichthyologist, a few years ago, a consultants fee because they did not even know what a Piranha looked like.

Texas is seeking to ban exotics because of fears of their effects if they were to be released. But Texas was criticized recently by ex-President Johnson's Water Pollution Control Advisory Board for management that threatened the well-being of native species. Yet, Texas authorities are more interested in hounding the

aquaria that possess fruit and water vascular [illegible]

Texas has described 19 separate species, 3 genera, and one family of [illegible] any aquarist wishing to keep any of these protected fishes must obtain a licence both for the fishes and eggs. A report must be lodged with the Parks and Wildlife Department every year for all the fishes and eggs kept under permit, and all methods of disposal of fishes or eggs must be reported in detail. Aquarists having these fishes in their tanks may present them to public aquaria but they must inform the Parks and Wildlife Department within thirty days of doing so.

In the U.S.A. there are an estimated 10,000,000 aquarists, the amount of paper work and the number of clerks required if all the States of the Union required permits for each and every fish or egg is left to the imagination of the reader.

The principal culprits in the release of alien fishes are not aquarists but fish farms and even Zoological Gardens. This is not to say that either concerns purposely release fishes. In the case of fish farms, overflow systems for the pools are not completely efficient in preventing the escape of specimens. It should not be beyond the powers of a nation so technically advanced as to be able to place men in orbit around the moon to design fish-proof overflow systems. Perhaps all waste and overflow water from the pools could be irradiated with U.V. light of sufficient intensity to destroy all creatures and plants in that water. Possibly even simple but efficient sand filter beds might suffice. The problem of pools overflowing during severe storms would also have to be tackled. Zoos that maintain alien fishes in watery compounds only [illegible] from water systems by canal [illegible] so far as much would certainly have to be taken up their security.

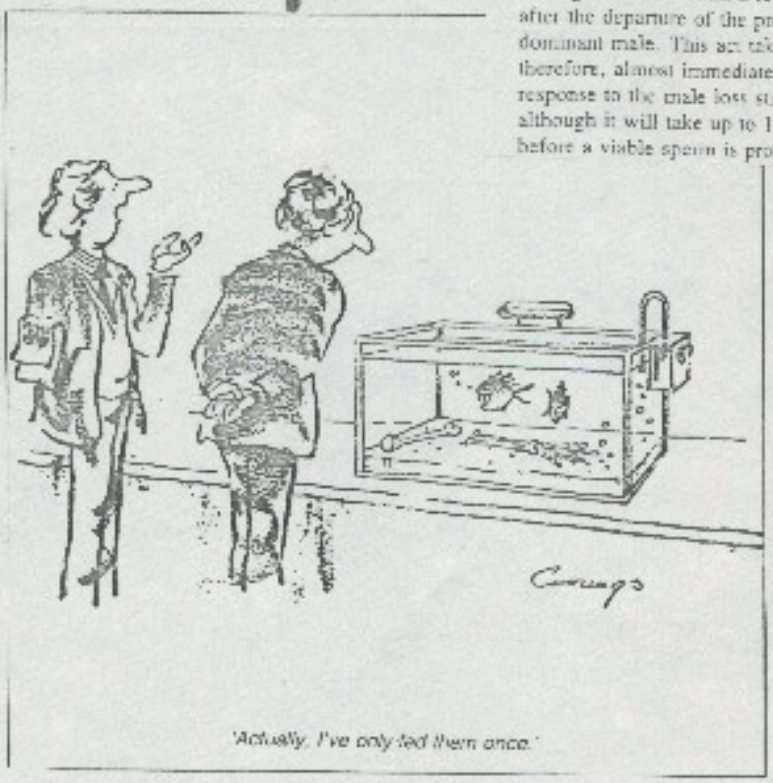
But the more part aquarists do not release exotics into new waters. The very price of many of their specimens prevents their doing this. Although we must bear in mind the situation that has occurred in the sewers of New York, where alligators threatened to establish themselves in this warm, if unusual habitat. Apparently numerous persons having purchased small alligators as pets tired of them as they grew and simply disposed of them by flushing them down the toilet!

Aquarists or any other persons who release exotics should be punished by law not only in the U.S.A. but [illegible] the U.K. for [illegible] aquarists can hardly object to such a law for it is surely better for all concerned than a licence for your fishes.

Whilst some tropical fishes are able to survive and even breed in the ponds and rivers of some ports of North America, very few indeed could be expected to survive British summers let alone winters. However, British aquarists should beware of releasing alien species that are used to a temperate climate or our own over-zealous legislators may have a good excuse to require us to buy licences for our fishes; imagine 5s. 0d. as a licence fee for every fish!

We should all be careful not to allow such fishes as Japanese Carp (Koi), the American Sunfishes and Grass Carp and the like to enter our rivers, pond, lakes and streams. The Grass Carp have recently been imported by the Electricity Generating Board to control water plants near cooling water inlets; this importation is to my mind of dubious value as if these fishes become established by eating large quantities of plants they could well destroy the spawning sites of many of our native fishes.

So, please Mr. and Mrs. Aquarist do not release any of your fishes; you could create a situation where we all have to troot down to the Post Office every year to buy a FISH LICENCE!



'Actually, I've only fed them once.'

Sexy Distinctions

Nature has allowed fish to evolve in such ways that the survival of the species is guaranteed even in the most adverse surroundings.

To this end the several species of fish embrace many different types of sexual behavior. First we have *Gonochorism* where a species is represented by permanently differing sexes. Next comes *Hermaphroditism* where each individual member of the species has functioning male and female sex organs. *Protogynous* refers to species that includes individuals that can change from females into males and *Protandrous* applies to species who do the converse — that is, the species comprises individuals that can change from males into females.

Generally, speaking, dominance factors determine sex within a particular population area. A prime example is *Labriclus dimidiatus*, a harem spawner, where the dominant male will attempt to mate with each female every day. If the male is removed from the harem the largest female will begin to exhibit male mating behavior within a few hours after the departure of the previously dominant male. This act takes place, therefore, almost immediately in response to the male loss stimulus although it will take up to 10 days before a viable sperm is produced.

SHOW 1985

It was very gratifying'to see ALL the membership, taking part in one way or another with the putting up or taking down of the show. Of course there were the usual "heroes" there always are although this year the most surprising heros came from the ranks of the lady members although there were plenty of husbands, boyfriends and others there as well. We have had many letters congratulating ua on the organisation and friendliness of the day.

After not sleeping for a week with worry the show got under way about mid afternoon on the Friday with a gang of members loading all the gear under the stage onto Jim Wylies lorry. This was transported down to the show hall at Leigh where other members were waiting to unload and begin putting up the staging and stands etc. I arrived about six after putting up "this way to the show" signs all the way from the Dartford Tunnel to the Leigh turnoff on the A13.

When we arrived the hall was quite well organised and under way. We were taking no chances this year with the staging, every single frame, nut and bolt was being tested and inspected by Len, Don and Nice the vice. The ultimate test was D.D. standing on them and jumping up and down. Nine o'clock was fish and chip time and after a bottle of scotch appeared, the rest of the setting up was much happier and at times quite erratic as the bottle emptied out, and the beer arrived. The middle of the night is a nice time at our show, by this time all the physical work has been done and it is now a nice time to start putting in your entries. Mike Smith of Romford arrived as did Ann Hurd from Orpington,

Everyone seemed to get up late this year because up till about 10 o'clock it was only hectic but after it became as always absolute chaos. What with benching, booking in, moving cars, mopping up and the buying.and selling of draw tickets, raffle tickets we just did'nt notice the time go by. Everyone must have been doing their jobs because without any prompting or nagging Tombola, Plant, and all the other attractions managed to get under way. Was'nt that other hall a stroke of genius, it might have been a tight fit but all the attendants in there seemed to love it.

Judging got under way only a little late (miracle) and they got through the 760 exhibits in record time, allowing us to get the cards and trophies sorted out and get down to the serious business of recouping some of the money we had invested.

Lucilles tombola was once again the best arround and again managed to make a collosal amount of money as did the raffle. Kelvin, at last sold out on all the draw tickets and the girls in the canteen apart from providing about 40 meals still came out with a profit. The little plant stand we tried this year was an overwhelming success and the how many fish in the tank stand also made money.

SPAWNING THE ZEBRA DANIO

Our first attempt at spawning the Zebra Danio (*brachydanio rerio*) was more or less an experiment. Our father, who has been involved in the tropical fish hobby since the mid-1930's, had bred several varieties of egg-layers but, to our surprise, had never managed to successfully spawn zebras, one of the so-called easiest. We decided to give it a try and read every reference we could find. All mentioned the ease of spawning the fish, but neglected to mention one important fact - - - the fish must be young and healthy. Our first try was with a group of zebras at least 2½ years old. We followed the traditional marble and shallow water method repeatedly and finally obtained a spawn of 22 fry (the first spawn was wiped out by a faulty heater). We were never able to spawn them again. But their offspring! We discovered that well-fed fry reach sexual maturity in only 10 weeks (another fact the books don't mention) and such is their willingness to spawn one need only say "boo" to get them started. We were surprised on shifting some surface plants in the 29 gallon tank containing the 10 week old zebras that they had spawned and fry were swimming among the leaves. Since then, we've tried different variations of the traditional methods, and have learned some helpful points the hard way. So fishers don't have to repeat our mistakes we'll detail our method.

The sexes can be distinguished in two ways. The female is noticeably fuller as spawning time nears while the male is always slim. When distended with eggs the female looks as if she has swallowed a pea. Besides the difference in body shape, the female has blue stripes on her anal fin with silver stripes between; in the male these lighter stripes are gold. The males can also be identified as being more aggressive and active.

The most vigorous males and females should be separated and the rest placed elsewhere. This separation, besides eliminating premature spawns, also develops their greatest spawning urge. During their isolation we've found it best to feed them lightly on frozen brine shrimp four times a day - - - say 8 a.m., 12 noon, 5 p.m., and 11 p.m. This brings the breeders into excellent shape.

The tank should be no smaller than 7 gallons, and filtered. We've tried both box and undergravel filters and found the latter best. The box type, even with the top removed and barely turned on, has a tendency to pull the fry into the cotton fibers where they strangle. We also provide an airstone for continual aeration — this not only seems to stimulate the fish but improves the chances of fertilization by circulating the water.

On top of the inch or so of gravel on the filter goes a layer of clean marbles three high. A 2" layer of marble-sized pebbles can be substituted but must be boiled first to destroy noxious chemicals and harmful bacteria. Marbles are best, for they allow a more uniform stacking and the greatest amount of crevices per least material. The whole idea is to provide a secure trap for the eggs. Since the non-adhesive eggs settle to the bottom, the goal is to get as many as possible safely to the tank floor and, thereafter, protect them in the numerous nooks and crannies. One danger with marbles is that zebras in fright (or hunger) may wiggle among them and be unable to get out. It's never happened to us yet — for they show great dexterity in working themselves loose. However, we always make it a point to do a quick head count every four or five hours while the adults are spawning.

The tank should be filled with tap water and allowed to filter for about a week before attempting spawning. If rainwater is used the time can be cut to 2 days. Zebras have extraordinary tolerance to temperature (60° to 110°F) but are sensitive to changes of water. Seasoned, preferably soft water is best. The tap water in our area is very hard, alkaline (pH 7.6), and heavily chlorinated, hence our preference towards rainwater.

Plants can be added to provide cover for the fish but aren't necessary and tend to introduce unwanted microscopic organisms. The temperature should be maintained at 77°, since higher temperatures tend to spoil the breeders and lower temperatures to make them sluggish. A north or south window provides more than enough natural sunlight.

When the time has come for spawning, select the most active males and the fullest females. The ratio of males to females should be 2 to 1. We've spawned as many as 8 males to 4 females at a time in a 7 gallon tank with good results. The ratio isn't hard set, however, and can be shifted about to meet the circumstances, i.e., an over abundance of very pregnant zebras can be spawned with a minority of males.

Before introducing the fish, turn off the filter and adjust the airstone to a gentle stream of bubbles. Siphon off enough water to leave about 1½" above the marbles (save to add later). Zebras are ravenous eaters of their spawn and the shallow water and marbles lessens the chances of them doubling back on their falling eggs or rooting them out [illegible] of the [illegible] they [illegible] very eager [illegible] and spawn most of the [illegible] time. The shallow water also allows better fertilization by concentrating the sperm in a smaller area. The females should be introduced 6 hours before the males to allow for acclimation. And make sure the temperatures are the same!

When properly conditioned, spawning will begin in about an hour, though we've had them begin anywhere from 5 minutes to 3 days. The males will initiate spawning by madly chasing the females and occasionally the females will turn and chase the males in order to stimulate them. Between spawning runs the males sometimes cavort wildly with each other. Occasionally the female will pause long enough to let the males catch up, and they will attempt to keep their vents pressed as close to the female's as possible. Jerkily, the female drops a cloud of eggs which are immediately fertilized by the males. The chase is then resumed, with further halts, until the female's spawn is depleted.

The turmoil of mating causes the eggs to be showered haphazardly through the water so some escape fertilization. As the eggs sink they swell rapidly to the size of a pinhead. In absorbing water a slight suction is created aiding the sperm cells to locate and fertilize the eggs.

The spawning act is seldom seen, but so far we've always been lucky enough to see the females drop their eggs. The presence of tiny clear eggs among the marbles and/or the marked thinness of the female indicates a spawn. There will also be a lessening of activity. The adult fish, of course, are removed after spawning and separated. If they haven't spawned within three days, remove, condition for another week, and begin again.

Eggs spawned by adults in excellent condition, with reasonably sanitary surroundings and properly conditioned water, will rarely fungus and methylene blue isn't really necessary. In any case the spawn shouldn't be thrown out in the absence of visible eggs (or fry) for at least 10 days, because they may remain hidden among the marbles. We had one group begin hatching on April 28th and on May 13th the last straggler hatched out.

The first eggs begin hatching in about 48 hours and continue to hatch for the next couple of days. For the first 2 days the fry remain curled up, feeding upon their yolk sac, then straighten themselves out and begin clinging to the aquarium sides and marbles in odd positions in their first efforts at moving about. The newly hatched fry, about 3 millimeters long, are nearly colorless, like tiny glass splinters. There are a few dark markings along the head and back. During this stage no food is taken. After 2 more days, they become free swimming and have appetites. Then the feeding begins. A healthy female may spawn more than 300 eggs, so plenty of food will be needed.

The best prepared food for zebra fry is "Liquifry" No. 1 (Red Tube). It's a liquid suspension of tiny pre-soaked food particles that quickly disperse throughout the tank and eliminates the danger of choking the babies. The quantity varies according to the number of fry. For a spawn of 200-300 we use 8 drops ever 4 hours (8 a. m., 12 noon, 4 p.m., 8 p. m. and midnight). Aeration (and eventually filtration) should be maintained as a precaution against over feeding as a surplus of food can deplete the available oxygen and foul the water. Under feeding can be as dangerous as over feeding for the fry are in need of a constant supply of food, more so at this stage than any other. Their appetites are gluttonous and they should be continuously pushed in growth.

When the fry are free swimming, begin adding a gallon of aged water every day until the tank is full again. The filter should then be activated and adjusted to a slow steady stream of bubbles (just enough that they can be counted).

Three weeks after hatching the fry are large enough to eat newly hatched brine shrimp, but continue to add a couple of drops of food at every feeding for the next 2 or 3 days to take care of any runts. At 4 weeks, they will began to take finely scraped frozen brine shrimp. When they are about 1/3 of an inch long they should be moved to a larger tank.

Zebra can, and should, be spawned whenever ready (about every 3 to 5 weeks) for it seems to keep them in better health and prevents their becoming egg-bound. The greatest number of fertile eggs results when zebras are spawned regularly. Often the first spawn obtained from a female that has rested 3 months or longer is mostly infertile. These spawns fail because the female has kept her eggs past their prime. The best age for breeders is about 1 year, at 2 they are old, at 3 they are dying.

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FIND THE WORD

Circle all of the words listed below. They may be vertical, horizontal, or diagonal and may read from either direction — such as right to left, or up and down. The remaining letters will spell out a word.

Answers to be written down and given to K Briscoe at next meeting.

A small prize will be given for the first correct answer drawn from hat.

H	S	I	F	D	L	O	G	W	W	E
L	T	M	U	I	R	A	U	Q	A	R
E	A	H	F	P	M	U	P	S	T	E
V	N	O	G	R	D	L	P	S	E	T
A	D	O	H	I	A	O	Y	O	R	L
R	T	D	R	N	L	S	O	L	A	I
G	R	O	T	A	R	E	A	F	E	F

1. AERATOR
2. AQUARIUM
3. FILTER
4. FLOSS
5. FOOD
6. GOLDFISH
7. WATER
8. GRAVEL
9. GUPPY
10. HOOD
11. LIGHT
12. PLANT
13. PUMP
14. STAND

LETTERS

Dear Mr. & Mrs. Waller,

On behalf of my family, I would like to thank you and your SLADAS friends for providing such an enjoyable day last Saturday, 4 May 1985. Two features of the Open Show particularly impressed my wife - Wendy - and me: -

(i) the very high standard of organisation

(ii) the friendliness, patience and kindness shown to us novices from 'foreign parts'.

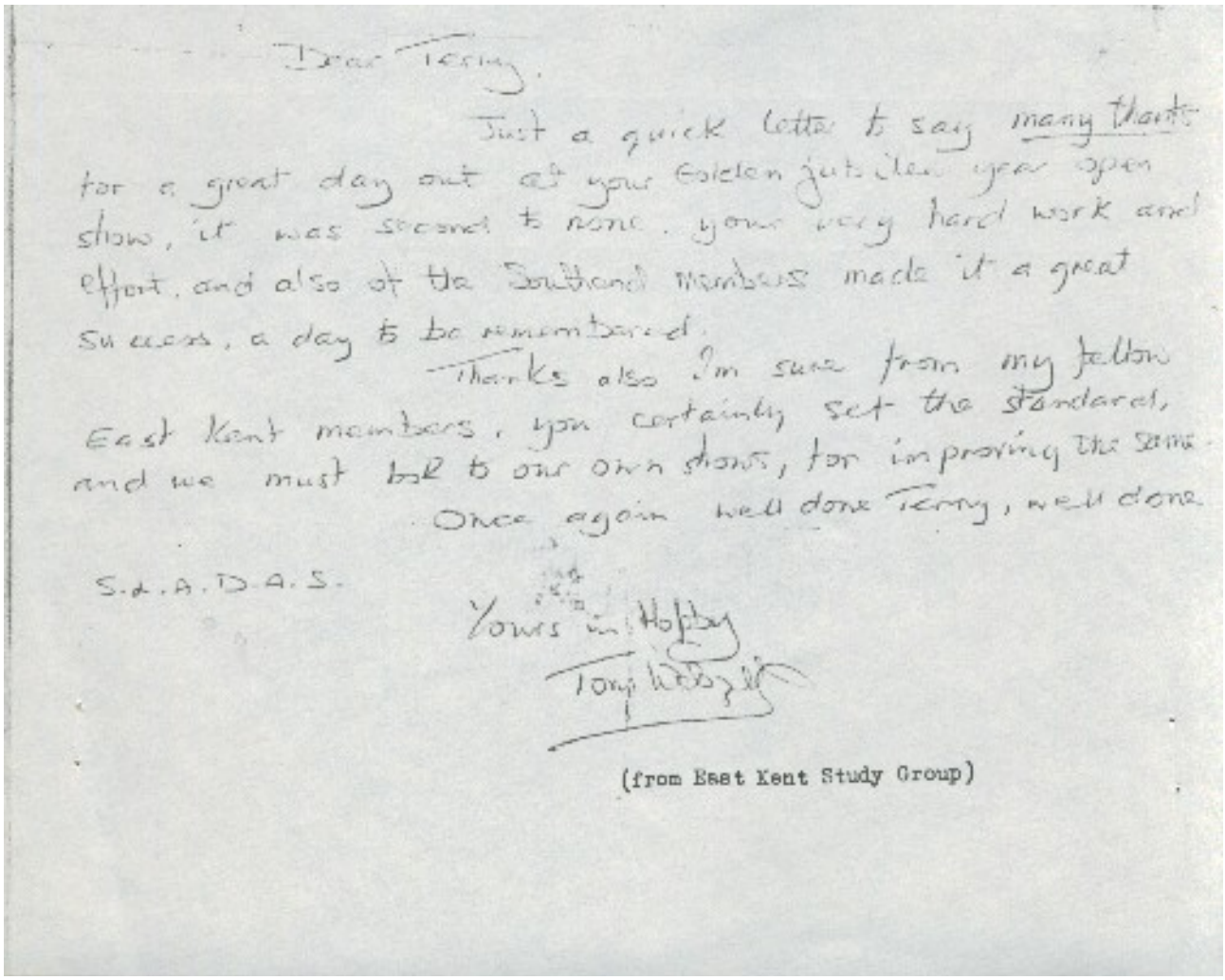
On both counts your Society is a marvellous example to the aquarist world and, as a result, we feel greatly encouraged to try our hand at showing specimens from our modest collection.

Thank you once again for a super day out for the family. We look forward to seeing you all again some day.

With kind regards,

Dr. Arnold Rainbow, (from Ipswich, Suffolk)

P.S. Please convey our thanks to Len for showing us how to show our fish and for the most enjoyable coach trip.



Dear Terry,

Just a quick letter to say many thanks for a great day out at your Eskdale just how your open show, it was second to none. Your very hard work and effort, and also of the Southend members made it a great success, a day to be remembered.

Thanks also I'm sure from my fellow East Kent members, you certainly set the standard, and we must look to our own shows, for improving the same.

Once again well done Terry, well done S.L.A.D.A.S.

Yours in Hobby

Tony Wesley

(from East Kent Study Group)

BITS AND PISCES

by Kevin Browse

Further to Peter Capons excellent talk on the Siamese Fighting Fish (*Betta splendens)* the generic name is derived from the Malay ikan betta)

Cynolebias means "with the teeth of dog",

A well known ichthyologist suggested splitting the barb family into three which genus being decided by the number of barbels the fish possessed. Those with four were *BARBODES*, those with two were *CAPOETA* those without were *BARBUS*.

When applying medication to the aquarium don't think that exceeding the stated dosage you will speed up the cure. Quite probably the reverse will occur and you end up with you fish dying (poisoned). Whilst on the subject of medication most people know how to calculate the number of gallons held by a tank i.e. length x depth x 6.25(measurements are all in feet).Allow .forthe gravel, rocks and any other ornaments and the fact that the aquarium isn't filled to the brim and you come up with a much lower level. Filters which use carbon/charcoal should not just be switched off but should be removed from the aquarium so should bogwood. Both absorb dyes such as Malachite Green. Disconnect the filter and whilst treatment continues use an airstone to increase the oxygen content of the water. It isn't the bubbles which directly supply oxygen to the water it`s when the bubbles reach the surface causing tiny waves, which increases the surface area, which in turn allows for more oxygen to penetrate.

The White Cloud Mountain Minnow is one of the easiest egglayers to breed and when very young it even outshines the Neon Tetra, two very good reasons to breed this beautiful fish.

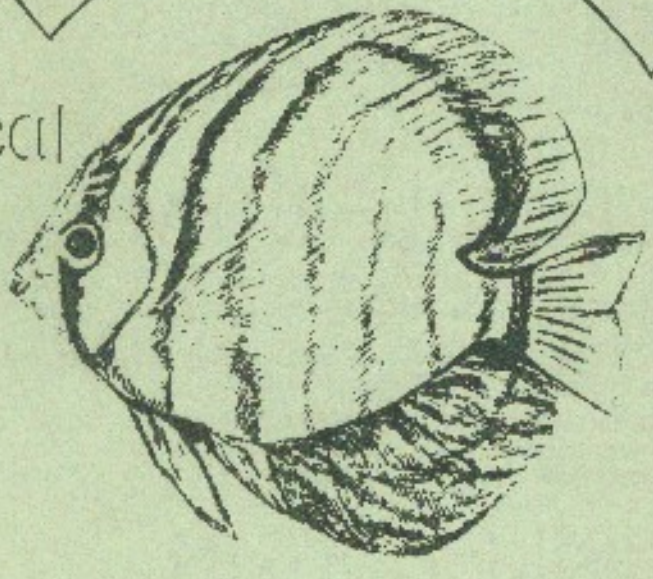
In my opinion the finest type of lighting to make the plants grow is incandescent (light bulbs). If you use them a generous application of vaseline just below the neck of the bulb will stop any condensation reaching the electricity.

For those stubborn cases of ich (white spot) in your tropical aquarium where malachite green doesn't seem to effect a cure try using Marine Cure or similar copper based cure.

When raising fry try keeping the water as shallow as possible. This concentrates the food and means the fry expands less energy catching it. Thus the fry gets more body building material from a specific amount of food. All fry extrude a substance which can act as a growth inhibitor. Different substances from different fish. This is natures way of stopping fish e.g. growing to full size in a very small body of water which won't hold enough food fish to sustain them. Although it may not .be possible to have that number of one species of fish in said tank it may be possible with two similar but different types of fish provided they also share a similar growth rate. Shallow water raises other problems besides the growth inhibitor for just as the food is concentrated so will the waste products be . Therefore you MUST do regular water changes. Syphoning from the bottom using air tubing you will remove the urine, excrement and growth inhibitor. When you replace the water add a little more than you removed. Especially with fry all changes to their envirement must be gradual.

BURGESS AQUATICS

BILL 22066



Tropical Marine

Coldwater

727 Rayleigh Rd, Hutton.

As far as we can discover this was the last issue of
Southend, Leigh & District`s Journal
It ran (with a nine year break) from 1948 to 1985 some thirty seven years A tribute to the enthusiastic aquarists in the Society over the years. Also a tribute to the late Howard Preston collector of Livebearers in Mexico in the 1970`s who revived the Journal in MAY 1963

IF there are issues beyond the present one we would like to borrow them to copy to complete our history.
Contact: peter.capon@yahoo.com

Southend Leigh and District Aquarist Society is still alive and well in 2012 and still holding an annual show.
Official website www.sladas.co.uk

More on our history etc at
http://southendaquarist.weebly.com

Videos of our various shows and aquatic subjects at
www.youtube.com/southendaquarist

Contact with the Society is via sladas@blueyonder.co.uk